

BALL VALVE SEAT SEAL

Abstract

A ball valve includes a body having a passageway there through with a ball member disposed in the passageway and mounted for selective rotation between valve open and valve closed positions to control fluid flow. A pair of flange grooves are provided in the body on opposite sides of the ball, each flange groove extending radially from the passageway. A pair of seat rings are disposed in the passageway on opposite sides of the ball. Each seat ring has a first sealing surface in contact with an outer surface of the ball and a radially extending annular flange or tab received in an associated one of the flange grooves. The seat design further includes a pair of annular flange seals each disposed in a respective one of the flange grooves. The seat configuration achieves a cantilever effect to improve the temperature and pressure cycling performance of the valve.